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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/051,897

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Eric V. Erickson

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10/26/2005

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EXAMINER

ABELSON, RONALD B

ART UNIT

PAPER NUMBER

2666

DATE MAILED: 10/26/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/051,897

Applicant(s)

ERICKSON, ERIC V.

Examiner

Ronald Abelson

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 April 2002 and 17 January 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 January 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>4/29/2002</u> . | 6) <input type="checkbox"/> Other: _____ |

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1 and 7 are rejected under 35 U.S.C. 102(e) as being anticipated by Wang (US 6,035,207).

Regarding claim 1, Wang teaches receiving connection outcome results of previous connections (fig. 8 boxes 108, 110, 112, col. 8 lines 41-54).

Wang teaches generating a statistical analysis based at least in part on the connection outcome results (channel priority value function of probability of success, mean quality margin, col. 6 lines 13-23, fig. 8 boxes 108, 110, 112, col. 8 lines 41-54).

Wang teaches assigning an incoming call to a channel based at least in part, on the statistical analysis (fig. 7 boxes 92, 94, 96, col. 7 lines 14-25).

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Regarding claim 7, the statistical analysis is a time-weighted method (moving window, col. 6 lines 25-29). Note, samples outside the moving window are given zero weight.

3. Claims 1-4 and 8-20 are rejected under 35 U.S.C. 102(e) as being anticipated by Wang (US 5,280,630).

Regarding claim 1, Wang teaches receiving connection outcome results of previous connections (recordable events, col. 5 lines 54-64).

Wang teaches generating a statistical analysis based at least in part on the connection outcome results (channel quality updated, col. 5 lines 54-64).

Wang teaches assigning an incoming call to a channel based at least in part, on the statistical analysis (col. 7 lines 30-37).

Regarding claim 16, Wang teaches a channel evaluator operable to generate a statistical analysis based at least in part, on connection outcome results (channel quality updated, col. 5 lines 54-64).

Wang teaches a storage buffer for storing the connection outcome results (fig. 3 box 64, memory, col. 5 lines 54-64).

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Wang teaches a call router for routing incoming calls based on the statistical analysis (col. 7 lines 30-37). The examiner corresponds the applicant's call router with the channel assignment of the reference.

Regarding claim 2, a preferred channel is one which successfully connects calls, and wherein the step of assigning the call to the channel, the incoming call is assigned to the preferred channel (col. 7 lines 30-37).

Regarding claim 3, a non-preferred channel is one which fails to connect calls, and wherein the step of assigning the incoming call to the channel, the incoming call is not assigned to the non-preferred channel (fig. 14 box 370,372, col. 16 lines 41-46). The examiner corresponds a channel that fails to connect calls of the applicant with a channel of poor quality in the reference.

Regarding claim 4, storing the connection outcome results in a buffer, the step of storing being performed after the step of receiving connection results from the previous call connections (fig. 3 box 64, col. 5 lines 54-64).

Regarding claim 8, wherein the statistical analysis is an asymmetrical weighing wherein success receives one value, and failure receives another value (channel service successful if it is neither blocked nor interrupted, weighting the interrupted calls ten to one over successful calls, col. 5 lines 1-47).

Regarding claim 9, classifying the channel based at least in part, on the statistical analysis (col. 5 lines 22-37, 56-58).

Regarding claim 10, a preferred channel becoming non-preferred due to a failed call connect attempt on the preferred channel, and a non-preferred channel becoming preferred due to a successful call connect attempt on the non-preferred channel (assign channel with best quality whenever possible, col. 7 lines 30-37, channel quality of the channels updated, col. 5 lines 54-65). The examiner corresponds the applicant's preferred channel with the channel in the reference with the highest value of the quality function and the non-preferred channels the rest of the channels on the PCL list. Given the channel quality of the channels is updated due to a service is finished

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successfully, a service is interrupted, or a channel is rejected due to bad quality (col. 5 lines 54-65), a preferred channel may become a non-preferred due to a failed call connect attempt on the preferred channel, and a non-preferred channel may become a preferred due to a successful call connect attempt on a non-preferred channel.

Regarding claim 11, indicating to a user a change in channel status (list of channels in decreasing preference, handset would choose the first acceptable channel and identify to the base station the acceptable channel, col. 7 lines 37-42). Note, as shown in the passage above, the handset is informed of the currently allocated channels in decreasing preference.

Regarding claim 12, determining which channels are not currently in use (fig. 13 box 310, free, col. 15 lines 22-25).

Regarding claim 13, assigning the incoming call to the channel based, at least in part on which channels are currently not in use (fig. 13 box 356, col. 15 lines 51-57)

Regarding claim 14, assessing a failure to the channel upon an unsuccessful call connection through the channel (channel

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quality updated: a service is interrupted, channel rejected due to bad quality, col. 5 lines 58-63).

Regarding claim 15, reassigning the incoming call to a next preferred available channel (allocated channel first channel in a free timeslot and currently in good quality, col. 7 lines 30-37). Note a blocked channel is in bad quality (col. 5 lines 62-63).

Regarding claim 17, the channel evaluator classifies channels; at least in part on the statistical analysis generated from the previous call connect results (col. 5 lines 54-63). The examiner corresponds the applicant's classifying the channels with the reference's updating the PCL.

Regarding claim 18, the channel evaluator determines which channels are available (fig. 13 box 310, free, col. 15 lines 22-25).

Regarding claim 19, the channel evaluator classifies channels, at least in part on the availability of a channel (fig. 13 box 310, free, col. 15 lines 22-25).

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Regarding claim 20, incoming calls are assigned to channels, and connected to the channels through the call router based at least in part, on the statistical analysis (col. 7 lines 30-37). The examiner corresponds the applicant's call router with the channel assignment of the reference.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claim 5 rejected under 35 U.S.C. 103(a) as being unpatentable over Wang (US 5,280,630) as applied to claim 4 above, and further in view of McKee (US 6,810,343).

Wang is silent on the buffer is a circular buffer.

McKee teaches a circular buffer (col. 3 lines 19-22).

Therefore it would have been obvious to one of ordinary skill in the art, to modify the system of Wang by replacing the buffer (fig. 3 box 64) with a circular buffer. The suggestion for the modification is circular buffers allows for the storing

of the most recently collected data by continuously overwriting the previously collected data (McKee: col. 3 lines 19-22). This enables an efficient use of buffer space.

6. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wang (US 5,280,630).

Wang teaches in calculating the quality function, the preferred embodiment is $M=10$ (col. 5. lines 20-48). However, this suggests that any positive for M may be chosen. The claimed no weighting condition is equivalent to $M=1$. Therefore, it would have been obvious to set $M=1$ as suggested by the reference.

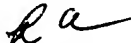
Conclusion

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ronald Abelson whose telephone number is (571) 272-3165. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Seema Rao can be reached on (571) 272-3174. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Ronald Abelson
Examiner
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